



SOIL TO SPOON

level 3



Using Earth To Feed The World





The food you eat comes from plants and animals that use the earth's natural resources to live and grow. It takes many people and a lot of work to bring food from the soil to your spoon.



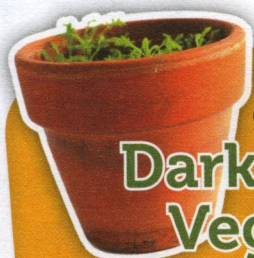
Fruit

Fruits like apples, oranges, strawberries, blueberries and many more are grown in the United States. Fruits are a great source of Vitamins A and C. Most fruits grow on trees, bushes or vines and get all of the nutrients they need from the soil.



Vegetables

Vegetables come in many colors and they all grow in soil. Dark green vegetables are one of the healthiest foods to eat. They supply our bodies with minerals like iron, calcium, potassium, and magnesium. They also provide vitamins K, C, E and B.



Grow Your Own Dark Green Vegetables!

Spinach is super healthy to eat and fun to grow. It can be planted in a pot on your porch or patio, in your yard or in your school's outdoor classroom. All you need are spinach seeds and soil. Plant the seeds 1/2 inch deep and water them. You will see sprouts in 5-10 days and can harvest fresh spinach to eat in about 30 days.

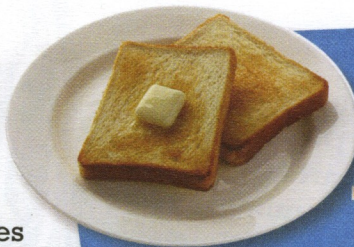


From The Soil To



Grains

Whole grain bread, cereal, pasta, and crackers are made with wheat. Over 2 million bushels of wheat are grown every year in the United States on more than 53 million acres of soil. Look at the chart on the bottom of the page to see some of the steps it takes to bring grains and other foods you eat from the soil to your spoon.



Make Your Own Butter!

You will need 1 cup of heavy cream, 1 marble and 1 plastic container with a tight lid. Any empty mayonnaise or peanut butter jar works well.



1. Put the clean jar and marble in the freezer for a few minutes to chill.
2. Put the marble and cream in the jar and screw lid on tightly.
3. Shake the jar until the cream thickens and butter forms.
4. Drain off the buttermilk, remove the marble and rinse the butter.
5. Store your butter in the refrigerator and enjoy!

Dairy

Ranchers raise cows on dairy farms. In one day just one cow can eat 90 pounds of food and produce enough milk to fill 100 glasses. Milk delivered today was in a cow only two days ago!



Protein



Chicken and eggs are lean proteins. An average American eats over 50 pounds of chicken and 240 eggs every year! That's a lot of chickens to raise and feed. The poultry and egg industry uses 100 billion pounds of feed every year. That means millions of acres of soil are used by farmers to grow grain. Ranchers raise the chickens, workers process the poultry so that we can eat it, and refrigerated trucks deliver it to the store.

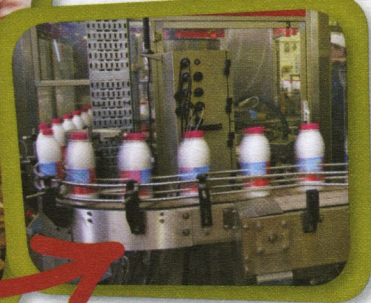


Which of these Natural Resources do you think are used to bring a drumstick to the table?

Circle your answers.

- | | |
|-------------|-----------|
| Air | Petroleum |
| Coal | Salt |
| Gold | Sand |
| Copper | Soil |
| Grains | Sun |
| Trees | Water |
| Natural Gas | |

Your Spoon



Look at the picture of the wheat plant.

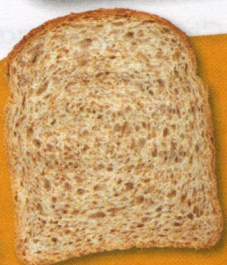
Read about the parts of the plant. Write the number by the name of each plant part. Write the name of each part in the correct space on the picture.

___ Stalk ___ Leaf
___ Root ___ Soil
___ Kernel ___ Ear

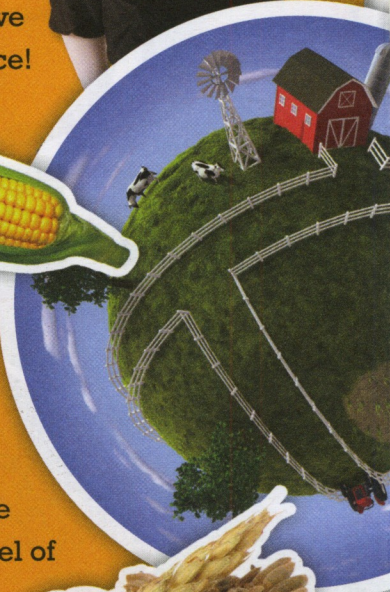
1. The grain-bearing part at the top of the stalk of a plant such as wheat, corn, or barley.
2. A single grain that contains a seed and husk.
3. Flat green part that grows from the stems or branches of a plant or tree. It uses the sun, water and air to make food for the plant by photosynthesis.
4. The part of a plant that grows underground, holds the plant in the soil and absorbs minerals and nutrients.
5. The top layer of the earth's surface. It is made of very small rock and mineral particles from erosion, organic materials, bacteria and fungi.
6. The main stem of a plant that holds up the leaves, flowers or ears.

Using Earth To Feed The World

When the first Pilgrims arrived in 1620, they might have died during that first winter from starvation if they hadn't been given some **corn** to eat by the Native Indians. We've been eating it ever since!



Wheat is called the staff of life. One bushel of **wheat** makes about 90 one-pound loaves of whole wheat bread.



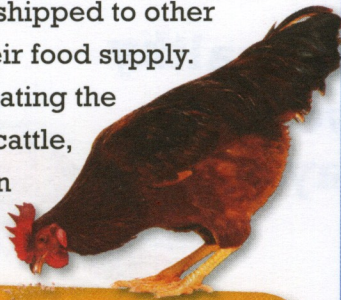
Word Bank

calcium	carnivore	conservation
fertilize	fruits	grains
nutrients	omnivore	protein
soil	soy	vegetables



Corn, hay, soybeans and wheat

are some of the crops grown in the United States. Farmers in the U.S. grow more corn than those from any other country in the world. The extra corn that we don't use is shipped to other countries to help with their food supply. We aren't the only ones eating the corn grown in the U.S. — cattle, hogs and poultry eat even more corn than we do!



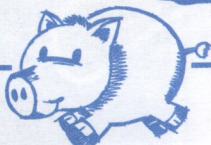
We are surrounded by **soybeans**! In addition to being a healthy snack, soy can be found in the cars and trucks we ride in, the books we read, the clothes we wear and many other places.



Hay you! **Hay** is grass or other plants that are cut, dried, stored and often used as food for animals like cows, horses and goats.



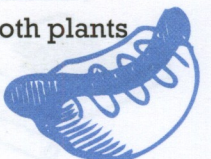
corn	crop	farmer
hay	herbivore	minerals
rancher	resources	roots
vitamins	wheat	



C E R O V I N M O W C K N C V
C O M U I C L A C O P C B V F
E A N S O Y P S R N W H E A T
Z E R S C A J N G E H M O P K
I S R N E S E L B A T E G E V
L T R O I R F F B H C M S L C
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R I P A B C B R T M P T R S O
E R K L I M H R E I E X E O B
F T R O O T S E E W O R N L U
Y U S T I U R F R H T N I M B
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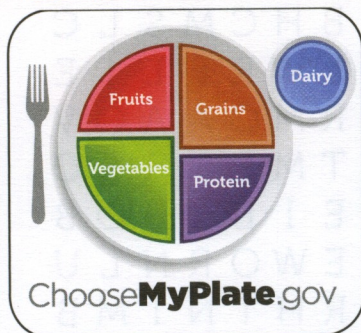
Fill in the blanks in the sentences with words from the Word Bank. Next find the words in the puzzle and circle them.

- 1 Dairy, _____, _____, _____ and proteins are food groups in the food plate.
- 2 Plants absorb _____ and other _____ from the _____ through their _____.
- 3 _____, _____, _____ beans and _____ are major crops grown in the United States.
- 4 _____s and _____s grow crops and raise livestock to provide us with food to eat.
- 5 It is important to practice _____ habits to protect our natural _____.
- 6 Dark green vegetables supply our bodies with minerals like iron, _____ potassium, and magnesium and _____ K, C, E and B.
- 7 Sometimes a farmer has to _____ the soil to grow a healthy _____.
- 8 A _____ eats only plants, a _____ eats only animals, and an _____ eats both plants and animals.
- 9 Meats, beans and milk foods are good sources of _____.



Eat Right... Exercise... Feel Better...

Have FUN!



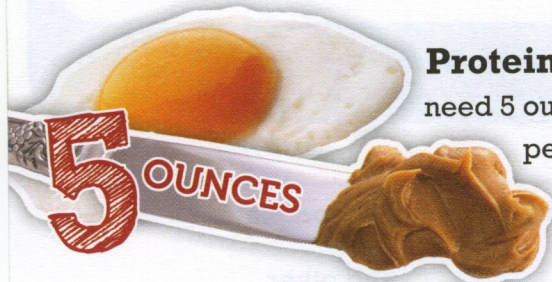
Your body needs healthy food from all five food groups every day.

Dairy Foods

provide calcium for strong bones and teeth. You should have 3 cups of dairy foods like milk, yogurt and cheese each day.

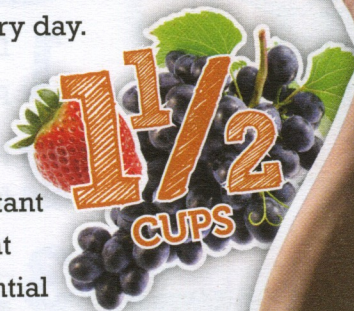


Protein Foods help your muscles grow. You need 5 ounces of lean meats, beans, eggs, or peanut butter every day.

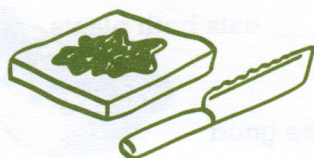


Fruits & Vegetables are two very important food groups from which most people do not eat enough of. Fruits and vegetables contain essential vitamins, minerals, and fiber that your body must have.

You should eat 2-1/2 cups of vegetables and 1-1/2 cups of fruit every day. To get the most benefit from fruits and vegetables... think color! Eat as many different colors as you can. Try to eat at least one leafy green vegetable daily. Then add some red, orange, yellow and purple to your daily diet. Strawberries, blueberries, bananas, oranges, sweet potatoes, corn, carrots, and broccoli are tasty choices.

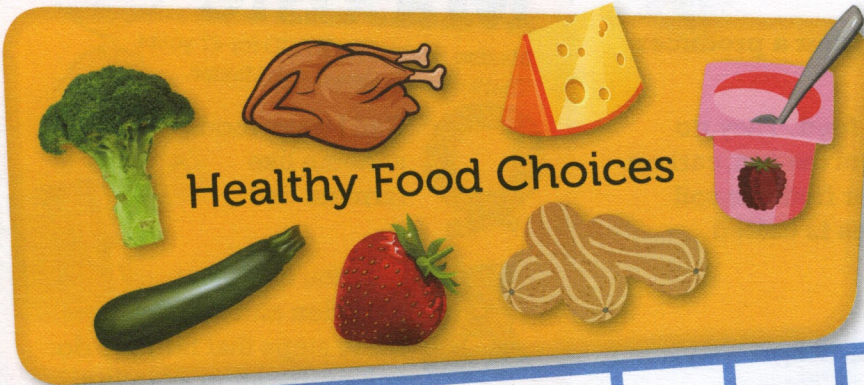


Grains are a good source of energy and healthy carbohydrates. Eat 6 ounces of grains every day. Try to make sure that at least half of those are whole grain foods like whole grain cereal, bread and oatmeal.



Find Your Way To Good Nutrition

Find the way out of the maze below by following the paths with **healthy food choices**. Start in the center of the maze. Draw a line through the paths from the center of the maze to the exit. For every **healthy food** you go through give yourself **5 points**. For every **unhealthy food** you go through **subtract 2 points**.



Number of **Healthy Food** choices _____ **X 5 =** _____ **Healthy Points**

Number of **Unhealthy Food** choices _____ **X 2 =** _____ **Unhealthy Points**

Your Score! _____ **-** _____ **=** _____ **Total Score**

Healthy
Points

Unhealthy
Points

How did you do?

We made good healthy food choices and got a total score of 35 points. If you top our score let us know!

Email: stewardship@nacdn.net



Where Are You In The Food Chain?



Every living organism is either a producer or a consumer.

Producers make their own food. They do this by using light energy from the sun, carbon dioxide from the air and water from the soil to produce food. **This process is called photosynthesis.**

Write the name of a producer _____ (Hint: green and leafy)

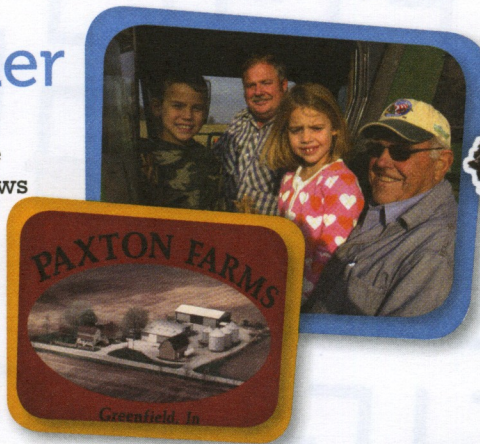
Consumers cannot make their own food, so they eat plants and/or animals. There are three types of consumers. **Herbivores only eat plants. Carnivores only eat animals. Omnivores eat plants and animals.**

Write the name of a consumer _____ (Hint: you!)

and what type of consumer it is. _____

Meet A Farmer

My cousin, Bryce Hasty and I (Haley Arthur) love to ride in the combine with our family who grows corn, soybeans and wheat in Hancock County in Indiana. Joe Paxton is Bryce's grandpa and my great uncle and Bill Paxton is our great papaw. Papaw Bill has been farming for over 62 years. He planted his first crop of wheat in 1948 and started helping his dad milk cows and farm when he was only 8 years old. Joe rented his first farm when he was only 10 years old in 1963. They both love farming and now farm over 2,000 acres and custom farm another 1,000 acres. Joe was in 4-H and showed pigs and Bryce and I both showed pigs this past year in mini 4-H. Taking care of the soil and being good stewards of the land is important to them both. Being a farmer, they say is taking a lot of risk and it depends on good weather to be able to have a productive crop. Their crops provide for people all over the world and we are very proud of them.



ASK Maxine

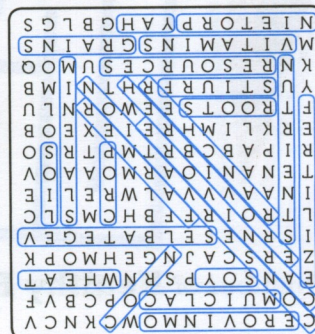
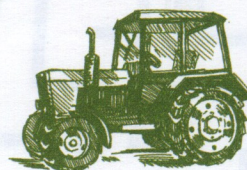
Maxine worked for NACD for 47 years. That's why we always ask Maxine.



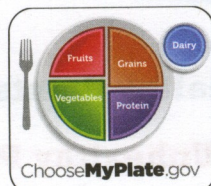
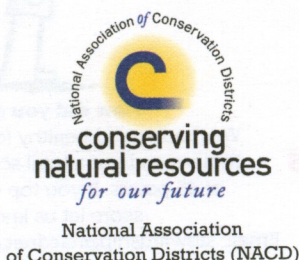
Q Can I grow food at home like farmers do?

A Yes! You can plant a garden and follow the same steps that farmers do: soil preparation, planting, nutrient and pest management, irrigation and drainage, and finally the harvest. As farmers go through the steps of crop production they are careful to take care of the soil and water on their land by following Best

Management Practices (BMP's). You also should conserve and protect the natural resources around your home as you garden. Gardening is fun and easy! Contact your local SWCD for tips on gardening in your community.



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